REMARKS

This responds to the Office Action mailed on September 16, 2005, and the references cited therewith.

Claims 37-39 are amended, no claims are canceled, and no claims are added; as a result, claims 37-39 are now pending in this application.

§102 Rejection of the Claims

Claims 37-39 were rejected under 35 U.S.C. § 102(a) or alternatively, under 35 U.S.C. § 102(e) for anticipation by Tobe et al. (U.S. 5,855,685). Applicant respectfully traverse this rejection.

The cited reference of Tobe discloses electrical insulators disposed between powered electrodes and the grounded portions of a plasma generation system. The insulators are arranged as a series of annular grooves surrounding the introduction hole. The surface of the electrical insulators is roughened to hinder the deposition and peeling (see col. 6, line 45) of conductive films on portions of the insulators that are within the plasma deposition region, which would cause a potential short circuit on the plasma generation coils. The annular grooves within the insulators are disclosed to be from 0.01 to 3 mm in width to prevent the plasma from penetrating the groove space and thus depositing conductive materials on the insulators. (see col. 2, line 50 to col. 3, line 67). The system is grounded using a coil 81, and copper plate 82, and a capacitor 83 arranged in parallel, to prevent the plasma from becoming unstable (see col. 7, line 51 – col. 8, line 26). The magnetic field is generated by a series of permanent magnets 121 arranged with alternating poles around a circle to provide a multi-cusped field near the wall of the chamber to prevent the plasma from diffusing near the walls of the chamber and thus maintain a high density (see col. 8, lines 42-64).

Applicant respectfully disagrees with the Examiner's discussion on the term "reactability increaser" on page 3 of the outstanding Office Action, and submits that this is equivalent to suggesting that the term is indefinite. Applicant respectfully submits that one of ordinary skill in the art would understand the bounds of the claims when read in light of the specification, in accordance with the ruling in ***Omega Eng'g v. Raytek Corp.***, 334 F.3d 1314, 67 U.S.P.Q.2d

1321, 1325 (Fed. Cir. 2003). In support of this, Applicant points to the specification at least at paragraph 42, where the ability of various inert gases, such as argon, to increase the reaction rate, and at paragraph 44, where the rate of the reaction is promoted to increase a deposition rate, etch rate, sputter rate and ionization rate are discussed, as indications that one of ordinary skill would understand the meaning and bounds of the inclusive term "reactability increaser". Further, Applicant notes that the similar term "reactivity promoter" appears in the specification at paragraph 42, and would also allow a worker of ordinary skill to understand the meaning of "reactability increaser". However, to advance the prosecution of this application, Applicant has amended claim 37 to recite a "reaction promoter", which appears in the specification at least at paragraphs 24, 26-32, 41 and 44. Applicant submits that this amendment is not made to distinguish over the cited reference of Tobe.

Applicant respectfully submits that the specification at least at paragraphs 8-10, 23 and 40 discusses that the CVD reaction may occur under conditions referred to as high density plasma reactions. The conditions discussed in the specification for the present invention at least at paragraph 27, differ from the cited reference in the portion referred to by the Office Action. In column 9 of Tobe, the deposition gas has a flow of 20 ml/min, the reactant has a flow of 200 ml/min, and the third precursor has a flow of from 20 to 35 ml/min in various embodiments. The pressure is stated to be one Pascal, which is equal to a pressure of 0.133322 millitorr.

Applicant respectfully submits that the cited reference of Tobe does not contain at least the claimed features of "*...a chemically inert reaction promoter mixed with said deposition gas at a rate of about 0.4 to 0.6 of a rate of flow of the reactant gas to form a high density plasma at a total pressure of greater than 1 millitorr ...*", as recited in independent claim 37, as amended herein. The cited reference does not have a high density plasma condition, does not have a reaction promoter, and the pressure is far lower than the recited value for the high density plasma system. The pressure of the plasma system is discussed at least at paragraph 27, and not new mater has been added.

The dependent claims are held to be patentable over Tobe at least as depending from a base claim shown above to be patentable over the reference, and further for containing additional

patentable limitations over the base claim. Claim 38 recites "*...having a flow rate of greater than 10 sccm ...*", which is found in the specification at least at paragraph 27, and thus no new matter has been added. Claim 39 recites "*...the reactant gas includes hydrogen at a flow rate of about 10,000 sccm, and the reaction promoter includes argon at a flow rate of at least 4,000 sccm ...*", which is found in the specification at least at paragraph 27, and thus no new matter has been added. The third precursor (stated by the Examiner to be equivalent to the reaction promoter) in Tobe is far lower (i.e., 20 to 35 ml/min depending upon the embodiment) than the recited levels, as is the reactant (taking Tobe's second precursor to be equivalent to the reactant for the sake of this discussion) since Tobe discloses a hydrogen level of from 30 to 200 ml/min.

In view of the above noted failure of the cited reference of Tobe to disclose the high density plasma, pressure range, flow ranges for all three disclosed gases, and a reaction promoter, Applicant respectfully submits that Tobe does not anticipate any of claims 37-39, and requests that this rejection be reconsidered and withdrawn.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney David Suhl at (508) 865-8211, or the undersigned at (612) 373-6951 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 16 Dec '05

By _____
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 16 day of December, 2005.

KATE GANNON _____

Name

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Signature